223. WAGATEA SPICATA, *vágáti* K., is a common thorny shrub. The pod is supposed to be good for tanning.

224. WRIGHTIA TINCTORIA, *kodmurki* K., *kálákudu* M., is a small tree with beautiful, white, hard and close-grained wood. The leaves are said to yield an inferior indigo.

225. XANTHOXYLUM RHETSA, *jummina* K., *tirphal* M., is a tree whose wood is little used. Oil made from the seeds is used as a medicine.

226. XANTHOCHYMUS PICTORIUS, *janagi* or *devamkái*, K. bears a pleasant yellow fruit of the size of an orange from which a yellow gamboge-like resin oozes.

227. XYLIA DOLABRIFORMIS, *jambe* K., *jámba* M., grows to a great size and is common. It is one of the iron woods. The wood is dark-red and is very hard and lasting. A seasoned cubic foot weighs from sixty to sixty-six pounds. It is in general use, and for piles for bridges and for sleepers cannot be surpassed. It is used by the lac insect but is unharmed by white ants.

228. ZIZYPHUS JUJUBA, *ilanjimara* K., *bor* M., grows to a moderate size and is mostly found in grass lands and gardens in the plains. The wood is dark hard and fairly close-grained and lasting. It is used in house-building and for many other purposes. A seasoned cubic foot weighs fifty-eight pounds. The fruit especially of the garden trees is extremely good. The bark which is used by tanners gives a kind of *kino* gum, which, with the bark root, seed, and leaves is used medicinally by the natives.

229. ZIZYPHUS XYLOPYRA, *mullu kára* K., *kánte gotti* M., is a small common tree. It is hard lasting and of a yellow colour. It is made into torches and field-tools. Its fruit is used to blacken leather.

Domestic Animals.

The domestic animals[1] of the district are, according to 1881-82 returns, oxen (109,034), cows (111,354), buffaloes (63,773), sheep and goats (6756), and horses (374). Everywhere but especially below the Sahyádris the stock is inferior. On the coast the pasture yields little nourishment. No Indian millet is grown, and rice straw is a poor substitute. In Kárwár, Kumta, Ankola, and Honávar there are few domestic animals of local breed. Bullocks in these coast sub-divisions are thin weak and stunted. Horses are brought by European officers, and some native officials keep ponies. But the climate is unsuited to horses, which always look thin and ragged. The *munchil* or hammock slung to a bamboo pole and the palanquin are the usual modes of travelling on the coast. A special class of men, belonging to the fisher castes, Bhois, Harikantárs, Khárvis, and Ámbers accustom themselves from boyhood to carry palanquins, constant usage raising a hard lump on the shoulder, which enables them to bear the weight of the pole without inconvenience. Above the Sahyádris, in the forest sub-divisions of Supa and Yellápur, domestic animals are extremely rare. In Mundgod, Haliyál, Sirsi and Siddápur ponies are kept for carrying packs by Pendháris,

[1] Most of the details of Domestic Animals are contributed by Mr. R. E. Candy, C.S.

Chapter II. Production.

and some good bullocks and buffaloes are also found. Both above and below the Sahyádris, the best cattle are imported from Dhárwár and Maisur.

Domestic Animals.

*Bullocks.*

Bullocks begin to work at about six years old. Carts and ploughs are generally drawn by one pair of bullocks. The usual cart-load varies from twenty to thirty *mans* of twenty-eight pounds. Pack-bullocks are used by Lambánis, Korchars, and Maris, who move from village to village selling rice, cocoanuts, plantains, and salt. A pack-load is three or four *mans*. In the rainy season the pack-bullocks are left to graze in the fields, but in the fair season they are stall-fed on straw, gram, oil-cake, and cotton-seed. The price of a bullock varies from £2 to £4 (Rs. 20-Rs. 40).

*Cows.*

Cows begin to calve at about five years of age, and go on bearing until they are about fifteen. They give one to two pints of milk a day for about six months after calving. Townspeople, in some cases, make special arrangements with husbandmen for rearing heifers. The husbandman rears the heifer till she is of age and in reward is allowed to keep the first calf on condition of sending the cow with its second calf to the owner. The price of a cow varies from 16*s.* to £2 (Rs. 8-Rs. 20), and is sometimes as high as £2 10*s.* (Rs. 25).

*Buffaloes.*

She-buffaloes begin to calve at five and go on bearing till they are about fifteen. They yield about six pints of milk a day for about eight months, and their price varies from £2 10*s.* to £5 (Rs. 25-Rs. 50). He-buffaloes are used for draught, ploughing, and pack carrying, and are stronger than bullocks. Formerly Gavlis used to roam the forest with large herds of buffaloes. These animals were found to cause much damage to saplings, and the Gavlis were ordered to leave the district unless they took to tillage and kept no more animals than were wanted for farm work. Hubli is the chief buffaloe mart. Buffaloes are also brought from Hubli, Ránebennur, and Bankápur, to Gokarn, Sirsi, and Haliyál for sale; the nearer they go to the coast the dearer they become. In Hubli the price of a good she-buffalo varies from £4 to £5 (Rs. 40 - Rs. 50). Haiga Bráhmans keep a large number of buffaloes as milk is their chief article of diet.

*Sheep.*

On the coast, sheep are brought from Haliyál, Sirsi, and Hángal. But the climate suits them so badly that they lose condition even in a single week. Good mutton is dear and little used. Milch-goats are occasionally kept by Muhammadans and Christians, but they are of a poor breed. Above the Sahyádris flocks of sheep and goats can obtain pasturage and keep in fair condition. In this part of the district a sheep can be bought for 2*s.* 6*d.* or 3*s.* (Rs. 1¼ or Rs. 1½), but below the Sahyádris the price is rarely less than 6*s.* (Rs. 3).

*Pigs.*

In Kárwár, Kumta, and Honávar the Goanese and other Christians keep pigs. These are of the common breed though better than those kept by Mhárs, Vádars, and others above the Sahyádris. Pigs are allowed to range about at will, picking up any food they can get. Great complaints are made by field-owners of the injury they do to their crops. A well fed pig fetches from 12*s.* to £1 (Rs. 6 - Rs. 10).

*Fowls.*

Fowls are kept by all classes except Bráhmans. The lower grades of husbandmen delight in cock-fighting, and they feed and train